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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,265	08/07/2001	George Z. Hu	26761U	4890
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NATH & ASSOCIATES 112 South West Street Alexandria, VA 22314			EXAMINER HOEKSTRA, JEFFREY GERBEN	
			ART UNIT	PAPER NUMBER
			3736	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

09/924,265

**Applicant(s)**

HU ET AL.

**Examiner**

JEFFREY G. HOEKSTRA

**Art Unit**

3736

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43, 45-52 and 54-58 is/are pending in the application.
- 4a) Of the above claim(s) 1-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42, 43, 45-52 and 54-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/3508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Notice of Amendment***

1. In response to the amendment filed on 02/28/2008, amended claim(s) 42 is/are acknowledged. The current rejections of the claim(s) 42, 43, 45-52 and 54-58 is/are *withdrawn*. The following new and reiterated grounds of rejection are set forth:

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 42, 43, 45-52, 54-55, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (US 5,517,021, hereinafter Kaufman) in view of John et al. (US 2001/0049480 A1, hereinafter John).
4. For claim 42, Kaufman discloses a system for performing a medical examination, comprising:
  - means for presenting a series of sensory stimuli (display element 88) for perception by a patient (as best seen in Figure 2 and 3);
  - means for detecting electrical signals representative of the patient's evoked potentials (electrode elements 20-30, 60-64, and 102) in response to said sensory stimuli (column 2 lines 55-68, column 6 lines 45-50), comprising a plurality of electrodes configured to be connected to a scalp of the patient (electrode elements 20-30, 60-64, and 102), wherein at least one electrode is capable of being placed over a visual cortex of the patient (as best seen in Figures 2, 3, and 5);

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- means for amplifying said signals (amplifier element 68), connected to said means for detecting (column 6 lines 27-32) (as best seen in Figure 3);
- means for converting said signals into digitized data, (A/D converter element 78) connected to said means for amplifying (column 6 lines 25-39) (as best seen in Figure 3);
- means for recording said data (data bus element 80), connected to said means for converting (column 6 lines 38-44, column 6 lines 58-61) (as best seen in Figure 3);
- means for measuring said data (memory element 82 and/or 84), connected to said means for recording (column 6 lines 38-44, column 6 lines 58-61) (as best seen in Figure 3); and
- a computer processor (computer element 94) programmed to analyze said data (column 6 lines 50-61) and programmed to compare said data to predetermined values to determine if said data is outside of predetermined ranges and thus indicates unreliable data results (column 3 lines 4-7, column 9 lines 28-56, column 12 lines 43-61), connected to said means for measuring and to said means for recording (as best seen in Figure 3),
- wherein said means for recording records each occurrence of data being outside of predetermined ranges (column 6 lines 38-44, column 6 lines 58-61) (as best seen in Figure 3), and
- wherein said computer processor is programmed to stop a collection of data after an occurrence of a predetermined number of faults (column 3 lines 4-7, column 12 lines 43-61) or after receiving an indication that the data collected is reliable.

5. For claim 43, Kaufman discloses a system for performing a medical examination, wherein said means for presenting said series of sensory stimuli comprises a computer controlled visual stimulus generating device (as best seen in Figures 3, (a), and 9B (column 6 lines 51-57)).
6. For claim 45, Kaufman discloses a system for performing a medical examination, wherein said means for converting said signals into digital data comprises an analog to digital converter (A/D converter element 78).
7. For claim 46, Kaufman discloses a system for performing a medical examination, wherein said computer processor is capable of executing a computer program comprising algorithms (column 6 lines 50-57, column 13 lines 6-9) and is capable of determining (a) whether said electrical signals reach a maximum value of the output of said means for amplifying said electrical signals (column 7 lines 58-60), (b) if the Fourier component of said electrical signals at 60 Hz exceeds a threshold value (column 4 lines 33-59), and (c) if said data abruptly jumps beyond predetermined ranges (column 3 lines 4-7, column 9 lines 28-56, column 12 lines 43-61).
8. For claim 47, Kaufman discloses a system for performing a medical examination, wherein said computer processor further executes a computer program comprising algorithms (column 6 lines 50-57, column 13 lines 6-9), the computer processor programmed to determine whether said electrical signals reach a maximum value output of said means for amplifying said electrical signals according to said algorithms (column 3 lines 4-7, column 7 lines 58-60, column 9 lines 28-56, column 12 lines 43-61).

9. For claim 48, Kaufman discloses a system for performing a medical examination, wherein said means for recording is capable of recording the occurrence of one of said electrical signals reaching said maximum output value (column 6 lines 38-44, column 6 lines 58-61) (as best seen in Figure 3).

10. For claim 49, Kaufman discloses a system for performing a medical examination, wherein said computer processor further executes a computer program comprising algorithms (column 6 lines 50-57, column 13 lines 6-9), the computer processor programmed to determine if the Fourier component of said electrical signals at 60 Hz exceeds a threshold value according to said algorithms (column 4 lines 33-59).

11. For claim 50, Kaufman discloses a system for performing a medical examination, wherein said means for recording is capable of recording the occurrence of the Fourier component of one of said electrical signals at 60 Hz exceeding said threshold value (column 4 lines 33-59, column 6 lines 38-44, column 6 lines 58-61) (as best seen in Figure 3).

12. For claim 51, Kaufman discloses a system for performing a medical examination, wherein said computer processor further executes a computer program comprising algorithms (column 6 lines 50-57, column 13 lines 6-9), the computer processor programmed to determine if said data abruptly jumps beyond predetermined ranges according to said algorithms (column 6 lines 38-44, column 6 lines 58-61) (as best seen in Figure 3).

13. For claim 52, Kaufman discloses a system for performing a medical examination, wherein said means for recording is capable of recording the occurrence of said data

abruptly jumping beyond said predetermined ranges (column 6 lines 38-44, column 6 lines 58-61, column 9 lines 56-58) (as best seen in Figure 3).

14. For claim 54, Kaufman discloses a system for performing a medical examination, wherein said means for recording is capable of recording the occurrence of said electrical signals drifting (column 5 line 60 – column 6 line 6, column 6 lines 38-44, column 6 lines 58-61) (as best seen in Figure 3).

15. For claim 55, Kaufman discloses a system for performing a medical examination, wherein said wherein said computer processor further executes a computer program comprising algorithms (column 6 lines 50-57, column 13 lines 6-9), the computer processor programmed to determine whether said electrical signals drift (column 5 line 60 – column 6 line 6) by using an average algorithm (column 6 lines 50-57, column 8 lines 39-48, column 13 lines 6-9) to smooth out said electrical signals over a period of time resulting in a curve of average signals versus time, integrating each segment of said curve and determining if the maximum value after segment integration exceeds a threshold value according to said algorithms (column 6 lines 38-44, column 6 lines 58-61).

16. For claim 58, Kaufman discloses a system for performing a medical examination, wherein said computer processor is further programmed to determine if said data passes a scattering check (column 6 lines 50-61, column 10 line 66 – column 11 line 16, column 13 lines 6-9).

17. Thus for claims 42, 43, 45-52, 54-55, and 58, Kaufman discloses the claimed invention except for expressly disclosing the means for detecting electrical signals

representative of the patient's evoked brain potentials and the computer processor is programmed to stop a collection of data after a recoding of a predetermined number of recorded data faults and the computer processor is programmed to stop the collection of data after recording a predetermined number of reliable data. John teaches a system (10) for performing a medical examination, comprising *inter alia*: a means for presenting a series of sensory stimuli for perception by a patient (26); a means for detecting electrical signals representative of the patient's evoked brain potentials (28) (paragraph 127); a means for amplifying said signals (30); a means for converting said signals (18); a means for recording said data (34); a means for measuring said data (48); and a computer processor (12) programmed with software (50) configured to stop a collection of data after a recoding of a predetermined number of recorded data faults (paragraphs 125, 136, 144-148, 153, 154, 158, 170, 177, 187, 194, 204, 207, 254-271, 288, 297-298, 300, 309, and 315) and the computer processor programmed with the software (50) configured to stop the collection of data after recording a predetermined number of reliable data (paragraphs 125, 136, 144-148, 153, 154, 158, 170, 177, 187, 194, 204, 207, 254-271, 288, 297-298, 300, 309, and 315). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. All of the component parts are known in Kaufman and John. The only difference is the combination of the component parts into a single device. Thus, it would have been obvious to one having ordinary skill in the art at the time of the



invention to combine the components as taught by Kaufman with the components as taught by John to achieve the predictable results of providing a programmed computer processor with increased data analysis capabilities to increase the diagnostic efficacy of a medical examination system.

18. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman in view of John and in further view of Miller et al. (US 6,629,935 B1, hereinafter Miller). Kaufman in view of John teaches a medical examination system as set forth above but does not expressly disclose a hood placed between the patient and said means for presenting. Miller teaches a medical examination system including a hood (3) placed between the patient and said means for presenting (as best seen in Figure 1). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. All of the component parts are known in Kaufman in view of John and Miller. The only difference is the combination of the component parts into a single device. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the components as taught by Kaufman in view of John with the components as taught by Miller to achieve the predictable results of providing a structure to isolate a part of the sensory system under examination to increase the diagnostic efficacy of a medical examination system.

19. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman in view of John and in further view of Miller. Kaufman in view of John teaches a medical examination system as set forth above but does not expressly disclose the sensory stimuli comprising a series of six patters of alternating and contrasting horizontally-oriented light and dark bans, wherein each patter differs from other patters by the thickness of each band. Miller teaches a medical examination system including a means for presenting a series of sensory stimuli for perception by a patient, wherein the sensory stimuli comprise a series of six patters of alternating and contrasting horizontally-oriented light and dark bans, wherein each pattern is capable of differing from other patterns by the thickness of each band (as best seen in Figure 1, 8A, and 9A). All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. All of the component parts are known in Kaufman in view of John and Miller. The only difference is the combination of the component parts into a single device. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the components as taught by Kaufman in view of John with the components as taught by Miller to achieve the predictable results of providing a variety of sensory stimuli or patient perception to increase the diagnostic efficacy of a medical examination system.

***Response to Arguments***

20. Applicant's arguments with respect to claims 42, 43, 45-52 and 54-58 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY G. HOEKSTRA whose telephone number is (571)272-7232. The examiner can normally be reached on Monday through Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/J.H./  
Jeff Hoekstra  
Examiner, Art Unit 3736

/Max Hindenburg/  
Supervisory Patent Examiner, Art Unit 3736